# Environment of Care®

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# **EC Key in Meeting National Patient Safety Goals for 2003**

Compliance with infusion pumps, clinical alarm system recommendations to be surveyed

nvironment of care professionals will play a direct role in meeting two of the six **Joint Commission 2003** National Patient Safety Goals:

- Goal 5—Improve the safety of using infusion pumps; and
- Goal 6—Improve the effectiveness of clinical alarm systems (see Box 1, page 10, for a discussion about and definition of clinical alarm systems).

Approved by the Joint Commission Board of Commissioners, the goals are effective for one year, beginning January 1, 2003, for all accreditation programs. EC concerns may also factor in indirectly for the other four goals, which involve patient identification, communication, high-alert medications, and wrong-site surgery.

Each goal has one or two specific recommendations (see Box 2, page 11), all of which were endorsed by the Sentinel Event Alert Advisory Group. In making its selection, the group reviewed the safety improvement recommendations in all published issues of Sentinel Event Alert for practicality, cost-effectiveness, and evidence base or expert consensus. In addition, the advisory group compared its proposed goals and recommendations with a draft (yet to be approved) of the "Core Safe Practices" of the National Quality Forum (NQF) and found good correlation between the two sets; this comparison was done to avoid unnecessary

additional burden on health care organizations that may seek to meet both sets of recommendations in the future.\*

"These six National Patient Safety Goals and recommendations provide a clearly defined, practical, and achievable approach to addressing what the experts have agreed are the most critical threats to patient safety in the nation's health care delivery systems," says Richard Croteau, MD, ICAHO's executive director of strategic initiatives.

# Surveying goals and recommendations

Beginning on January 1, 2003, as part of all full accreditation surveys and random unannounced surveys, JCAHO surveyors in all accreditation programs will assess an organization's implementation of the specific recommendations



(continued on page 10)

<sup>\*</sup> For JCAHO accreditation, organizations will be surveyed only on the JCAHO goals and associated recommendations.

# **Reminder: EC Standards Going into Effect January 1, 2003**

Five accreditation programs affected

s a reminder, the following standards changes affecting the environment of care will go into effect January 1, 2003. For full coverage, see the Environment of Care® News articles indicated, where appropriate.

For hospitals: EC.1.4, intent statement F, cooperative planning.

Item F of EC.1.4 calls for cooperative emergency management planning among health care organizations that together provide services to a contiguous geographic area. Item F, used during 2002 for consultation purposes only, will begin to be scored for accreditation purposes January 1, 2003.

For information on the revised emergency management standards for hospitals, please see the following issues of Environment of Care® News:

- January/February 2002, page 1, "Emergency Management Standards Clarified";
- March/April 2002, page 1, "Emergency Management Will Be Key in 2002 Surveys"; and
- May/June 2002, page 8, "Emergency Drills."

For ambulatory care, behavioral health care, and long term care: EC.1.4, emergency management.

Emergency management standards revisions similar to those made for hospitals were also made for ambulatory care, behavioral health care, and long term care organizations. The revisions to EC.1.4 support sharing of information and resources as part of emergency management planning to ease the burden of potential emergencies on individual health care organizations and coordinate emergency management planning among health care organizations in a community.

For hospitals: EC.1.4, intent statement, emergency privileging.

An added sentence to EC.1.4 for hospitals states, "If the organization has determined that it will grant emergency privileges during a disaster, then the requirements of MS.5.14.4.1 should be followed." This will begin to be scored for accreditation purposes January 1, 2003.

For long term care/ behavioral health care: EC.4.1 intent statement, EC.4.2 and EC.4.3, resident safety activities/safety program for individuals served.

Long term care and behavioral health care organizations will be required to integrate environment of care monitoring and response activities into the organizationwide resident safety program/safety program for individuals served activities. The requirement, addressed in the intent of EC.4.1, states that the individual responsible for the organization's environment "coordinates the integration of environment of care monitoring and response activities into the organizationwide resident safety program." This requirement does not in any way call for a new, separate resident safety program.

In addition, EC.4.2 and EC.4.3 were revised slightly to link to the applicable safety program.

See Environment of Care® News, January/February 2002, page 8, for further information.

For home care: EC.4 intent statement, emergency management; EC.4.1 intent statement, emergency drill.

(continued on page 5)

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# **Environment of Care® News** Goes Monthly

Issue increase provides timely information about Joint Commission Shared Visions—New Pathways initiative

eginning in January 2003, Environment of Care® News will be published 12 times a year. Each month subscribers will receive an issue packed with the best in clear, practical advice on Joint Commission EC standards compliance and survey process information.

The change in frequency to monthly publication will give subscribers the most up-to-date news about

- EC standards changes and Joint Commission initiatives, including Shared Visions—New Pathways (see the Perspectives Special Issue, October 2002);
- $\blacksquare$  the new Statement of Conditions<sup>TM</sup>, reflecting adoption of the 2000 Life Safety Code®;
- other EC-affecting Joint Commission initiatives as they develop;
- national initiatives that affect EC, such as those from the Centers for Medicare and Medicaid Services (CMS), the Occupational Health and Safety Administration (OSHA), and other key organizations; and
- all the latest in EC standards news, interpretations, and Q&A's.

The change to monthly publication is a direct response to reader requests. The most recent marketing research shows strong reader interest in receiving EC News on a monthly basis.

Health care professionals are realizing how critical the environment of care is to a successful health care organization. Now more than ever, they know that they need information about every aspect of managing

EC, from emergency management to construction infection control.

EC News provides that information—accurately—from the source. That has been the EC News slogan since it began publishing: "Right from the source—from the right source." No other newsletter has the real inside track on Joint Commission EC standards and information.

Not only will subscribers enjoy the benefit of EC News each month, they'll find a host of new regular features, including

- Standards News—late-breaking EC standards news and in-depth features on EC standards:
- Survey Session—survey tips, checklists, and ideas from JCAHO surveyors and JCR consultants;
- EC & Sentinel Events—in-depth information on how EC is a common root cause of more than 1/3 of the reportable sentinel events and what can be done to prevent these events; plus EC's role in root cause analysis (RCA) and failure mode and effects analysis (FMEA);
- Featured Forms—the best of EC policies and procedures, management plans, and other forms readers can adapt and use;
- Nuts & Bolts—step-by-step instructions, how-to's, and diagrams to help readers tackle everyday EC problems; and
- **Secure It**—tips on everything from access control to preventing infant abduction and resident elopement.

The monthly EC News will still include all the favorite features

readers have come to depend on:

- Q&A—expanded and including a special feature question and answer;
- Case Study—with a new focus on pragmatic, hands-on examples of how organizations address EC compliance issues; and
- Emergency Management Watch continued timely coverage of this key area.

And more than ever, EC News will be designed and written for health care organizations across the boardhospital, ambulatory health care, long term care, assisted living, behavioral health care, home care, laboratories, and networks.

### **Subscription basics**

For only a moderate fee increase, subscribers will receive double the issues of EC News-12 instead of 6. And the increase in publishing frequency decreases the actual per-issue cost to subscribers.

How does this work for current subscriptions and renewals? All current subscriptions will run their full 6-issue course. Current subscribers will automatically receive their renewal notices, which will be for the new 12-issue subscription. (See the box below.) All new subscriptions will be for 12 issues.

### Online and print available

New and existing subscribers can choose how they want to receive their EC News subscriptions: in print, online, or both.

Subscribers who choose the online subscription to EC News will benefit from special features.

To order, subscribers can call 800/346-0085, ext 558, and say, "Bill Me," or order online by visiting Infomart at www.jcrinc.com. Potential subscribers can also receive a free sample issue by calling the number above or viewing a sample issue online at www.jcrinc.com/periodicals.

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Print only:	\$245	\$280	\$265	
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Our standards experts tackle extensions on a PFI, whether to use the Hospital Emergency Incident Command System (HEICS), and more.

This issue of our Q&A column is brought to you directly from the live codes and standards panel at the summer 2002 ASHE convention. One panel respondent was Dean H. Samet, CHSP, CJCS, Associate Director, Standards Interpretation Group, Joint Commission. If you'd like further information from our staff, please contact the Joint Commission's Standards Interpretation Group in the Division of Accreditation Operations at 630/792-5900, or e-mail them at ecnews@jcrinc.com.

### Breakaway features in psych areas

In my last Joint Commission survey, I was cited for not having breakaway grab bars in my psych area. Yet my state will cite me if the bars do not hold a minimum of 150 pounds. How can I remain in compliance?

Perform a risk assessment based on the patient population served and any past history of attempted suicides using these grab bars. Document assessment results and take whatever actions are deemed necessary, if any. Note: The grab bars are necessary to assist patients in sitting down or getting up, but breakaway grab bars could also be used as weapons. All such issues should be considered when you perform the risk assessment.

### Showerheads in psych areas

Where can I find shower heads that are hang resistant? My local suppliers tell me that these devices are not made or marketed as such.

Again, perform a risk assessment addressing this issue. If this is determined to be a risk, based on patient population served and a history of attempted suicides using showerheads, existing heads should be replaced with either the breakaway showerheads or conical-shaped heads that are available on the market.

### Extensions on a PFI

Are all first-time Plans for Improvement (PFIs) given a sixmonth extension period?

Yes. (See EC News, September/ October 2002, page 4.) However, any other PFI extension would require that you make a written request to the Joint Commission's engineering staff, listing the exact PFIs with original anticipated completion dates and new anticipated completion dates and a brief explanation about the reason for not meeting original completion dates.

### Laundry chute doors

Do we need to provide locks to the laundry chute doors located in soiled utility rooms? The soiled utility room doors are lockable to the public corridor.

No. Per National Fire Protection Association (NFPA) 82, "If entrance to a limited-access service opening is gained by key, the service opening door shall not require a key to be opened. One opening or the other shall be keyed. Keying shall be required only for limited-access

installations." The Joint Commission expects that a risk assessment be performed to determine if chutes, other than limited-access installations, need locks on either the service opening room doors or the chute loading doors.

### HEICS

Considering cooperative planning, will the Joint Commission recommend or require facilities to use the Hospital Emergency Incident Command System (HEICS)?

The Joint Commission does not have prescriptive standards and does not require a particular incident command system. The requirement is that a system must integrate with the community. Hospitals in a contiguous geographical region need to work together, and it makes sense for them to use the same system, but HEICS is not specifically required.

Has HEICS been accepted nationally?

HEICS is the only national model specifically designed for health care and was developed in and is used throughout California. Other incident command system models are also used nationally. The important thing is that whatever system you use must integrate with your local community. Implementation of community planning requirements should be the responsibility of the local governmental entity, not individual health care providers.

### Survey cycle/continuous readiness

Where is the Joint Commission on the 18-month survey cycle? Will this take place, and if so, when? How will it change the survey process?

The goal of the 18-month survey A is to ensure continuous readiness. The current model under consideration is a self-assessment with an electronic report of deficiencies and proposed correction submitted to the Joint Commission for approval and implementation. This process is scheduled to start January 2004.

### **Decontamination runoff** disposal

Can runoff from washing contaminated patients be put into the sewer?

When managing a small hazmat incident, you should try to contain the water per Environmental Protection Agency (EPA) requirements. However, when handling a large incident, you are highly diluting the contaminant with copious amounts of water. EPA has gone on record as saying that this can be discharged to the sanitary seweralthough *not* the storm drain.

### Freestanding business occupancies and battery-powered emergency lights

Can freestanding business occupancies, including outpatient clinics, medical office buildings, and so forth, be cited by the Joint Commission for not having battery-powered emergency lights?

No. Until recently, the Joint Commission had been requiring freestanding business occupancies to have and to test their battery-powered emergency lights. However, because the Joint Commission is not surveying for strict compliance with the Life Safety Code® for freestanding business occupancies, and the standards state that emergency lighting is necessary only "as required by occupancy classification," the Joint Commission can no longer cite freestanding business occupancies for not having or testing emergency battery-operated lights (for 30 seconds monthly and 90 minutes annually) if this lighting is not required.

Even though it is probably a good idea to have backup emergency lighting in business or outpatient settings (and to properly maintain that emergency lighting), the Joint Commission should no longer be citing organizations in this area of compliance in the emergency power systems portion of the standards.

However, if an organization's local authority having jurisdiction (AHJ) does require such emergency lighting in these settings, then the lighting should be properly maintained and tested per that AHJ's requirements. And in that case, the Joint Commission could issue a citation for failing to comply with the local AHJ.

### **Ergonomics**

Does the Joint Commission look at ergonomics programs?

Although the Joint Commission does not have an explicit standard on ergonomics, this concern is

implicit in the worker safety standards. In addition, with the JCAHO/ Occupational Health and Safety Administration (OSHA) partnership, surveyors are aware of OSHA-related issues and can potentially ask an organization what it is doing in the area of ergonomics.

### EC Standards Going into Effect

(continued from page 2)

Revisions expanding the existing intent statement of standard EC.4 include the following expectations for home care organizations:

- Analyze those hazards to which the home care organization is vulnerable and use that analysis to focus emergency planning.
- Define the command structure to be initiated at the time of an emergency.

■ Work with the emergency management planning authority in the home care organization's region or county, when available, to establish priorities among the potential types of emergencies identified in the organization's Hazard Vulnerability Analysis. Because a home care organization may provide client services in multiple communities, it may not be practical for the organization to work with each of these communities in prioritizing vulnerabilities. However, the home

care organization should work to establish a coordinated effort that is meaningful to the service area (that is, regional, county, or metropolitan) of the home care organization.

In addition, a new requirement has been added to the intent of EC.4.1 for home care organizations to conduct at least one drill annually to assess their emergency management plans.

# **How the New Joint Commission Staffing Standard Relates to EC**

### Environment of care staff may be considered "indirect" caregivers

shortage of building operating engineers and biomedical engineers would directly affect the general health care environment, the availability of medical equipment, and even airborne infection control. Delayed or deferred maintenance results in delayed or canceled treatments and possible adverse outcomes. For example, EC short staffing could contribute to a situation in which a patient dies from a fluid overload because repairs had not been completed on the free-flow pump or review of a patient elopement may reveal that a closed unit's alarm system failed because the battery backup system was discharged and a safety check was not completed.

The new Joint Commission staffing effectiveness standard\* outlines a patient-centered staffing model that focuses on both direct and indirect caregivers and resulting outcomes. Leaders must identify who in the organization affects clinical outcomes and then collect human resources data for those job classifications to see if staffing may contribute to negative clinical outcomes. Staffing is defined as having the right number of competent staff, in the right skill mix, available to provide safe, quality service. EC staffing can encompass facilities managers, maintenance personnel, biomedical engineers, building operations engineers, security personnel, and, increasingly, housekeeping personnel.

The Joint Commission standard does not specify which caregivers are considered to be direct and which are indirect, but leaves it to each organization to decide. Direct caregivers, however, typically deliver hands-on patient care and include nurses and physicians. Indirect caregivers typically have an impact on clinical/service outcomes because when they are not available, direct caregivers must either provide their service or cannot accomplish their job. For example, if housekeeping is not available, a nurse must prepare a room for a new admission. Or if a piece of medical equipment is not available, a physician may have to wait to deliver a patient's treatment.

It is not mandatory to include EC staff in any JCAHO staffing indicators. But there are issues to consider if you'd like to make the case to your organization leaders that EC staffing should be included in the patient-centered staffing analysis required under HR.2.1.

Several approved Joint Commission screening indicators (see box below) are directly linked to EC activities or issues:

- Patient falls,
- Injuries to patients,
- Patient/family complaints,
- Postoperative infections (due to poor or contaminated ventilation), and
- Pneumonia (due to poor or contaminated ventilation or Legionellacontaminated water supply).

But other screening indicators may be indirectly linked to EC. For example, if an organization's EC staffing is inadequate to maintain the building, its systems, and EC concerns, adverse outcomes can result at many intersections—security, emergency management, general safety, fire safety, hazardous materials, infection control, and others—and could result in occurrences in the clinical/service section.

## Connecting EC and care outcomes

As highlighted in the new standard, close cooperation and communication between direct care staff and EC staff is critical. EC staff must provide a safe, functional, supportive, and effective environment for patients, staff, and visitors. Yet it is the direct care staff who work in and use the environment on a daily basis. Though these two groups may seem isolated from each other as they accomplish their daily tasks, a disconnect between the two can have serious consequences.

EC staff play a role in patient safety and must work with direct care staff to ensure it. Joint efforts between EC staff and direct care staff prevent falls, elopements, suicides, infant abductions, and

### **Joint Commission staffing screening indicators**

#### **Human Resources**

- 1. Overtime\*
- 2. Staff vacancy rate\*
- 3. Staff satisfaction\*
- 4. Staff turnover rate\*
- 5. Understaffing compared to organization's staffing plan\*
- 6. Nursing care hours per patient day
- 7. Staff injuries on the job\*
- 8. On-call or per diem use\*
- 9. Sick time\*

#### Clinical/Service

- 10. Family complaints\*
- 11. Patient complaints\*
- 12. Patient falls\*
- 13. Adverse drug event
- 14. Injuries to patients
- 15. Skin breakdown
- 16. Pneumonia\*
- 17. Postoperative infections\*
- 18. Urinary tract infection
- 19. Upper gastrointestinal bleeding
- 20. Shock/cardiac arrest
- 21. Length of stay
- \* These indicators are directly related to EC; however, other indicators may be indirectly related.

<sup>\*</sup> Hospital Standard HR.2 became effective July 2002 and a similar standard for ambulatory care and behavioral health care organizations are expected in the coming year.

workplace violence and promote infection control, fire safety, enforcement of smoking policies, and safe use of restraints.

By searching for the root causes of a negative outcome, leaders can tie the outcome to related human resources issues, which may include EC staff as indirect caregivers. Some questions to ask in identifying a possible connection between a clinical outcome and an indirect caregiver's role include the following:

- Did any clinical indicator show unusual trends or patterns in performance over time?
- Were any indicators out of expected ranges of performance?
- Was any relationship noticed between a human resources indicator and a clinical indicator?
- In drilling down for unexpected performance (trend or pattern detected, undesirable range of performance, relationship found), did you find that the cause(s) was related to staffing effectiveness?

### **Analyzing EC staffing**

"It can be hard to identify cause-andeffect relationships between one EC job and overall business objectives, such as number of patients cared for on shift, number of x-rays taken, etcetera," observes Dale Woodin, deputy executive director of advocacy for the American Society for Healthcare Engineering in Chicago. "The environment of care is often seen as support or overhead and is typically the first area cut in operating budget and staffing."

But EC staffing is based on the equipment and facilities you have, not the census—regardless of whether you have one patient or a thousand, you need to maintain the building. And EC staffing is evolving as the number of people performing the job decreases and the complexities of technology and expectations increase.

"Organizations need to redefine operational tasks, the skill level required, and the number of people available to

### **Tips for Appropriate EC Staffing**

- Focus on basics. Determine the critical functions of your department and direct resources for meeting goals.
- Break down the business into key operating issues. Determine what human resources are needed to supply/provide those services.
- Examine services/functions that "we have always done that way."
- Challenge managers to identify time-consuming tasks that are unneeded and add little value. For example, many EC departments provide nonessential services, such as changing light bulbs, because clinical departments don't want to do them.
- Re-examine regulatory compliance tasks and determine if you are "overcomplying." For example, are staff performing unnecessary preventive maintenance or taking unnecessary equipment readings?
- Reconsider off-shift staffing (nights and weekends). Determine if the amount of work produced is worth the staffing time.
- Make sure clinical departments are receiving appropriate training and hold departments accountable for excessive EC staffing needs due to equipment abuse, rough handling, not following procedures, and so forth (for example, a spill cleanup in the pneumatic tube system due to lack of proper bagging). Charge back these staffing costs to drive home the message and get the behavior to change.

perform the tasks," explains Woodin. "[They need to] determine the resources needed to supply or provide those services." Woodin provides some tips to streamline EC tasks and effectively staff the EC in the sidebar above.

The Hazard Vulnerability Analysis that organizations are performing for emergency management can be useful here because it can define high-risk patient care areas that cannot function or provide care without appropriate EC backup—for example, providing biomedical equipment and staff to manage any emergencies that might arise. The number, competency, and skill mix of needed staff depend on the patient care area. For example, the staff of one county hospital in Florida knew that the emergency department was at high risk for violent outbursts at the times when the local "knife and gun clubs" met. Every Friday and Saturday from 9 pm to 4 am, they made sure that sufficient security, environmental services, lab, and x-ray technicians were in house (not just on call).

Carole Patterson, MN, RN, a health care consultant at Joint Commission Resources, suggests keeping an eye on incident reports. "Talk to risk management, or whoever tracks incident reports in your organization, to look at

the reports through EC eyes to see if anything happened related to EC staffing," urges Patterson. "Just consider any of the examples highlighted at the start of this article."

If you are just starting to tie EC staffing to overall patient outcomes, start with something you know. Try taking a look at your budgeting process:

- How do you defend a request for a new staff member?
- How do you evaluate whether last year's numbers are adequate? Do you look at the time it takes to complete a work request? the amount of time a critical piece of equipment is out of service for more than 24 hours? backup equipment availability? equipment usage patterns? potential patient outcome if equipment is not available?
- What indicators or measures do you look at to see whether you have the numbers to do your job adequately?

Examine the issues in light of the clinical outcomes to which they contribute. "Take an afternoon to look through the data you have on hand with EC staffing in mind," advises Patterson. "You'll be surprised at what you see that you've never noticed before."



# **Emergency Contact Info at the Ready**

Greater New York Hospital Association revamps directory, creates key emergency data source, links area hospitals

hen it wanted to speak to someone at one of its 200 member organizations, the Greater New York Hospital Association (GNYHA), like most hospital associations, was accustomed to using a basic directory of phone numbers, listing key managers from the CEO on down. A tried-and-true communications tool, the directory had served its purpose well. Then came September 11, 2001.

Within five minutes of the first hijacked plane striking the first tower of the World Trade Center, the City of New York called GNYHA and asked it to send someone to the city's emergency operations center to help coordinate response among the area's hospitals. The center itself was soon forced to relocate. But back at the GNYHA office, relates Susan Waltman, senior vice president and general counsel, "we immediately started reaching out to all of our hospitals to establish contact. We sent out an e-mail instructing members to activate their disaster plans, but we also wanted information from them: who needed supplies, who had supplies to share, what was going on in their emergency rooms, who the incident commander was (among those who use the incident command system, which is the majority), and, most urgently, how to contact their emergency operations centers (EOCs). We were able to get to the

person in charge through the chief executive officer or whomever we initially called at each hospital, but that step definitely caused a delay in reaching the EOCs."

Thus was born the idea for the emergency contact directory, which promises to cut through any communication snags and lags between GNYHA and members in disaster conditions. It also helps meet JCAHO's requirement for hospitals to have certain key information about each other.

### Multiple contact points

By February 2002 GNYHA had sent out a survey form, asking members to complete and return it by March. At the start of August, Waltman was still chasing down a few stragglers, and office staff were still reeling from the data input deluge, but the directory contained complete information for 100 hospitals and 10 of the association's largest nursing homes and had already been snatched up by state and city emergency managers.

In addition to the primary and backup phone numbers for each member's primary and any alternative EOC, the directory lists the centers' e-mail addresses and their mobile phone, pager, satellite, fax, and twoway radio numbers. It lists the same information for the chair of each member's disaster committee. And it lists radio links to New York City's

Office of Emergency Management and corresponding agencies in other communities, contact information for the person maintaining the radios, and ham radio frequency.

"It covers every way that we may want to contact our hospitals," says Waltman. "For example, we've loaded all the e-mail and fax numbers into our blast e-mail and fax functions; this takes us right into each members' EOC computer if we need to instantly communicate with all of our hospitals." (GNYHA also has blast fax/email lists for a dozen other categories of personnel that it might want to reach during an emergency, including infection control directors, emergency medicine chairpeople, and medical directors.)

That's not all, however. The directory, in database and binder form, "is really reflective of the type of information that we might need during future disasters," Waltman explains. "How many patients can you handle in your outdoor contamination facility? How many monitored negative pressure isolation rooms do you have? Do you have a burn unit? We can now run reports from the database and give this information to the city and state."

When the directory is 100% complete, GNYHA plans to distribute it in binder form to all member organizations, as well as GNYHA's emergency preparedness committee. "If there's a

disaster before then, I've told everyone that I'm just going to send the current database to them by e-mail."

### **Facilitating data collection**

The emergency contact directory is part of a larger array of products and services that GNYHA is creating in response to the experience of 9/11. Among other things, says Waltman, "we have worked with the state to develop a separate data collection system that would be activated during a disaster, so that hospitals could go to a secure Web site and input information that the state requests."

"The complete set of data elements, which we helped to define, gives people a headache when they first see it," Waltman says, "but it represents an improvement over 9/11, when we found that federal, state, and local agencies were all asking for much the same information but in slightly different ways. Now a hospital can know in advance the exact format of the majority of questions that people might ask. And it would never be asked all of them. The state might say, for example, 'Hospitals in such and such counties, please answer the following questions."

To communicate with hospitals about this data collection system—to ensure that hospitals incorporate this system into their disaster plans and that the appropriate people all have assigned passwords, for example—the state has used GNYHA's emergency contact directory to create an e-mail list of disaster committee chairs.

"The directory was a great asset to us when we needed to alert committee chairs to a new method for obtaining access to our data response system," says Mary Ellen Hennessey, health program administrator, Bureau of Hospital Services, at the New York State Health Department. "Having a current roster of their e-mail address-

### **Emergency Contact Directory Form**

Address		
Main Phone es Covered by EOC		
tes covered by LOC		
	EMERGENCY OPERATIONS CENTER	R (EOC) CONTACT INFORMATION
	Primary EOC	Alternative EOC (if any)
Location		
Tel #1:		
Tel #2:		
Mobile #:		
Pager #:		
Satellite #		
Nextel Radio		
Fax #		
EOC E-mail		
	Chair of Disaster Committee	Emergency Contact (if no EOC Activation)
Name		
Title		
Tel # office		
Mobile #		
Pager #		
Satellite #		
Nextel #		
Fax #		
E-mail		
	Facility In	nformation
Trauma Center Leve	(I, II, or III) (if applicable)	
Burn Center / Burn U	Init	
Utilize HEICS / ICS		
Outdoor Decontamir	nation Facility / Capacity	
	an Be Decontaminated at Same Time	
The state of the s	e Pressure Isolation Rooms	
# Monitored Negativ	e Pressure Isolation Rooms in ED	
	Radio Inf	formation
NYC Facilities: 800 M	1Hz Radio Linked to NYC OEM	
Outside NYC Facilitie	es: Radio Linked to Other Agency	
If Yes, What is that	Agency?	
Contact Info for Pers	son Maintaining Radios in NYC	
	son Maintaining Radios Outside NYC	
HAM Radio Frequenc	cy (if applicable)	
	DIRECTORY DATE:	

Organizations completed this form to give GNYHA thorough information for the directory.

es allowed us to contact them quickly.

"In general, all disaster response planning should include updated and accurate rosters of critical contacts: this can make the difference between a well-coordinated emergency response and a poor one."

GNYHA has itself made use of the directory in working with the New York City Office of Emergency Management on several recent occasions—heat emergencies, power outages, the explosion of a power plant. "It's not as valuable as it would be if

the hospitals involved had activated their emergency operations centers. But whereas in the past we sometimes had a hard time reaching the right person on a weekend, say, now we have more contact numbers available to us."

With luck, a larger disaster will not come along any time soon to require full use of the emergency contact directory. If it does, however, GNYHA is ready.

### Patient Safety Goals

(continued from page 1)

for National Patient Safety Goals relevant to the organization's care and services. Organizations must implement all recommendations for all relevant goals. Failure to implement one or more of the relevant recommendations—or an acceptable alternative for each recommendation will result in a single special type I recommendation.

Alternatives must be submitted for review by the Sentinel Event Alert Advisory Group and acceptance by JCAHO prior to the health care organization's scheduled accreditation survey; these entities will determine whether the alternative is at least as effective as the identified recommendation in achieving the related goal.

If an organization implements an alternative to a recommendation without prior review and approval by JCAHO, this will result in a type I recommendation. The organization may then submit the alternative approach for consideration, using the revision request process. If the alternative is accepted and is adequately implemented as determined by the surveyor, the type I recommendation will be removed.

"From a practical standpoint, organizations should be looking at their processes and policies and laying out the training, education, monitoring, and analysis needs that will be essential for helping them meet these goals and recommendations," says advisory group chair Henri Manasse, Jr, PhD, ScD. "This whole process distills the critical components of organizations' performance, essentially synthesizing what they have been doing, and will continue to do, to promote safety."

For further information about the 2003 National Patient Safety Goals in general, see September 2002 Perspectives, pages 1 and 4a, and July 2002 Perspectives, page 1.

#### **Box 1: Clinical Alarms Defined and Discussed**

What does "clinical alarm systems" include? Is it just the ventilator alarms that were discussed in the recent Sentinel Event Alert on ventilator-related events?

No. Actually, this goal is much broader. Although the goal originated with the Sentinel Event Alert on ventilator-related events, the advisory group saw the goal as being relevant to the full spectrum of alarm systems that are triggered by physiologic monitoring of the patient or by variations in measured parameters of medical equipment directly applied to the patient. Examples might include cardiac monitor alarms, apnea alarms, elopement/abduction alarms, infusion pump alarms, or alarms associated with measuring gas pressure or concentration going directly to or coming from the patient, such as a fraction of inspired O<sub>2</sub> (FIO<sub>2</sub>) from a mechanical ventilator to the patient or an exhaled CO<sub>2</sub> fraction in the operating room.

#### Clinical alarm systems and the Medical Equipment Management Program (MEMP)

How does the requirement for preventive maintenance and testing of clinical alarm systems fit with the EC standards for medical equipment management? The standards allow an organization to exempt certain equipment from routine preventive maintenance (PM). Should this exemption be permitted for clinical alarm systems, given the new recommendation associated with National Patient Safety Goal 6?

All clinical alarms must be included in the inventory of equipment cov-Rered by the organization's MEMP, as defined in the standard for managing medical equipment (EC.1.6). This standard permits an organization to use different maintenance strategies, as appropriate (for example, predictive maintenance, interval-based inspections, corrective maintenance, metered maintenance) for its medical equipment, based on a risk assessment of each piece of equipment, using criteria that address equipment function (diagnosis, care, treatment, and monitoring), physical risks associated with use, and equipment incident history. The intervals for inspecting, testing, and maintaining clinical alarms are based on criteria such as manufacturers' recommendations, risk levels, and current organization experience. (See Box 3 on page 11.) See the equipment management standard in the applicable accreditation manual(s) for additional details.

Clinical alarms that are integrated into medical equipment should be inspected and tested along with the other components of the equipment as defined by the manufacturer's recommendations and/or an organization's current PM inspection protocol.

In light of the recently released patient safety goals, organizations may choose to revisit their PM protocols (starting with their most critical equipment and systems) to ensure that alarms are appropriately addressed in the current procedures. When reviewing equipment management reports for "problems, failures, and user errors," managers should look for patterns of failures of alarm annunciators on a model-specific or device-specific basis. Negative trends may serve to focus maintenance, use, or training issues. In addition, clinicians should be reminded of self-check procedures for verifying alarm operation prior to and during use of critical equipment.

### Box 2: 2003 National Patient Safety Goals Linked to EC and Recommendations for Meeting Them

National Patient Safety Goal	Specific Recommendations Applicable to EC	EC Connection	Sentinel Event Alert Source
1. Improve the accuracy of patient identification.	1.a. Use at least two patient identifiers (neither to be the patient's room number) whenever taking blood samples or administering medications or blood products.	Security/privacy of patient data	"Blood transfusion errors: Preventing future occurrences" Alert 10
3. Improve the safety of using high-alert medications.	3.a. Remove concentrated electrolytes (including, but not limited to, potassium chloride, potassium phosphate, sodium chloride >0.9%) from patient care units.	Hazardous materials, worker safety, and patient safety	"High-alert medications and patient safety" Alert 11
	3.b. Standardize and limit the number of drug concentrations available in the organization.	Security, hazardous materials, worker safety, and patient safety	"High-alert medications and patient safety" Alert 11
5. Improve the safety of using infusion pumps.	5.a. Ensure free-flow protection on all general-use and PCA intravenous infusion pumps used in the organization.	Medical equipment management	"Infusion pumps: Preventing Future Adverse Events" Alert 15
6. Improve the effectiveness of clinical alarm systems.	6.a. Implement regular preventive maintenance and testing of alarm systems.	Medical equipment management, utility systems	"Preventing ventilator-related deaths and injuries" Alert 25; Apr 2002 <i>Perspectives</i>
	6.b. Assure that alarms are activated with appropriate settings and are sufficiently audible with respect to distances and competing noise within the unit.	Medical equipment management	"Preventing ventilator-related deaths and injuries" Alert 25; Apr 2002 <i>Perspectives</i>

### Box 3: One Organization's Approach to Testing Clinical Alarm Systems

Our organization is considering taking a "what could go wrong" approach with regard to the recommendation on testing and assessment of alarm systems. We would use a typical CQI tool, such as a fishbone diagram, to search for potential causes of problems. These could include

- technical—known or historical malfunctions, alarm volume controls that go to "off," and so on;
- user error—staff unfamiliar with equipment, staff do not understand meaning of alarm indications, staff not aware of alarm off/on status;
- environmental—high ambient noise levels, presence of sound-blocking walls and doors, use of other similar-sounding alarms; and
- **other concerns**—concerns that are unique to the facility and/or its devices.

By performing this comprehensive assessment on each system, we would proactively address potential problems. Some issues, such as userrelated items, would likely need ongoing and repeated reinforcement or training due to normal staffing changes.

However, unless the area substantially changes for some reason (remodeled, new equipment, etc), the overall assessment (testing) may not necessarily have to be repeated on a regular basis. The technology or facility planning phases of such projects would need to consider the impact of changes on the alarm system before such systems are purchased and installed.

—Don Whiteside, CHE, Interim Director, Facilities Management/Biomedical Engineering, Hurley Medical Center, Flint, MI





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